San Jacinto River Waste Pits Site - Summary of FS Residual and Release Modeling Assumptions 4/22/2015

Alternative	Alternative Summary	Remedial Technology	BMPs	TCRA Site				Offshore location near Upland Sand Separation Area		Notes
				Eastern Cell		Western Cell				
				Residuals[1]	Releases	Residuals[1]	Releases	Residuals[1]	Releases	
4N	Remediate portion of TCRA Site containing D/F concentrations in excess of 13,000 ng/kg TEQ	Partial Solidification/Stabilization (S/S) and Capping	● Eastern Cell - S/S using sheetpile to facilitate dewatering ● Western Cell - S/S in the dry	Zero	0.85%	Zero	Zero	---	---	● No simulation of residual/release from western cell since assumed this would be remediated in the dry, and from land. ● Release rate in eastern cell associated with sheetpile wall containment.
5N		Partial Removal and Capping	● Eastern Cell - removal using turbidity curtain ● Western Cell - removal in the dry	Zero	3%	Zero	Zero	---	---	● Zero residuals since alternative assumed to include include backfilling followed by reconstruction of the Armored Cap. ● No simulation of residual/release from western cell since assumed this would be remediated in the dry, and from land. ● Release rate in eastern cell associated with turbidity curtain containment.
5aN	Remediate areas exceeding PCL of 220 ng/kg TEQ in water depths shallower than 10 ft	Partial Removal and Capping	● Eastern Cell - removal using berm or sheetpile ● Western Cell - removal using berm or sheetpile	5%	0.85%	5%	0.85%	---	---	● Release rate associated with earthen berm/sheetpile wall containment around entire remediation area, per USEPA direction. ● Assumed residuals would occur under this alternative since removal in entire area would occur in the wet (includes residuals management through placement of a sand cover).
6N	Remediate areas exceeding PCL of 220 ng/kg TEQ	Full Removal and Residuals Cover	● Eastern Cell - removal using turbidity curtain ● Western Cell - removal using turbidity curtain ● Big Star Property - removal using turbidity curtain	5%	3%	5%	3%	5%	3%	● Assumed residuals would occur under this alternative since removal in entire area would occur in the wet (includes residuals management through placement of a sand cover).

Notes:

1. 5% value represents the percent of the dredge residual concentration assumed to be mixed into the residual (sand) cover layer, based on past project experience by Alcoa and King County.
2. 0.85% release rate based on mid-point of measurements made during Hudson River dredging, where a sheetpile wall was used (Anchor QEA and Arcadis, 2010).
3. 3% release rate based on typical value reported in case studies summarized in Table 4-2 of the FS. ERDC EL TR-08-4 indicates range of 2% to 9% depending on presence of debris/rock (Figure 3).

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